DOCUMENT RESUME

ED 279 293 IR 012 529

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TITLE	IT in Educational Administration and Management. CET Information Sheet No. 9.
INSTITUTION	Council for Educational Technology, London (England).
PUB DATE	Mar 84
NOTE	16p.
AVAILABLE FROM	Council for Educational Technology, 3 Devonshire Street, London W1N 2BA, England.
PUB TYPE	Guides - Non-Classroom Use (055) -- Information Analyses (070) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Computer Managed Instruction; Computer Software; Developed Nations; *Educational Administration; Elementary Secondary Education; Foreign Countries; *Information Technology; *Management Information Systems; *Microcomputers
IDENTIFIERS	United Kingdom; Vendors

ABSTRACT

This document provides information on the use of information technology (IT) to assist in educational management and administration, considers where future developments may lead, and provides definitions of IT and its elements--information handling, communications technology, and information transformation. The involvement of the Council for Educational Technology (CET) in investigations of the use of IT for helping school administrators and teachers with administrative tasks is described and a number of tasks now being performed by computers are listed. The recommendations resulting from a seminar convened at CET to discuss the organizational, technical, and informational aspects of introducing IT into the schools are provided, and some factors to be considered when purchasing or developing computer-based educational administration and management systems are suggested. Also included are lists of sources for further advice and information; software suppliers; magazines, journals, and books on IT; and institutions currently or recently involved in research. A list of Microelectronics Education Programme (MEP) Regional Information Centres is appended. (DJR)

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CET INFORMATION SHEET No.9

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IT IN EDUCATIONAL ADMINISTRATION AND MANAGEMENT

Introduction

The aim of this Information Sheet is to help the spread of information about current good practice in the use of Information Technology to assist educational management and administration. It is also intended to give some consideration to where future developments may or even should lead, since these will influence the choices now open to schools and colleges.

We consider that information technology offers the possibility of an improved educational environment, since the microprocessor's speed, capability and willingness to undertake boring and repetitive tasks can release teachers and their managers for more creative and satisfying work. We are concerned, however, that these teachers and managers should be sufficiently well-informed to take sound decisions when choosing a system or strategy.

CET first became interested in this use of IT in 1982 when investigating the role of the microcomputer in preparing pupil profiles. It became apparent that educational administrators and managers were experimenting with a range of computer-based technologies to meet a wide variety of their needs. Some individual schools and LEAs were fairly well advanced; others had difficulty in locating sources of good software or advice.

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Definitions

We hope that the information, contacts and sources of software etc listed in the Sheet will be helpful to local education authorities as well as to individual institutions.

We have looked at the use of technology to help:

a) teachers to undertake those administrative tasks necessary to support their teaching e.g pupils' academic records, administration of independent learning systems;

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and

b) administrators and managers to administer and manage institutions of education and training, eg. returns to central or local government, curriculum analysis for staff/student numbers planning.

CET understands information technology to consist of three main elements:

1. Information handling: the storage and retrieval of information eg. a collection of pupil records (storage) from which the details needed to fill in DES Form 7 are extracted (retrieval).

2. Communications technology: the transmission of information eg. communicating examination entries to an examining board.

3. Information transformation: the manipulation of information; putting it into a form in which it is usable for a particular purpose eg. organising pupils' option choices into feasible teaching blocks.

Many of the developments we have encountered have relied upon the development within an institution of microcomputer-based information handling and transformation. For technical and other reasons there is less evidence of use of technology-assisted information transmission. Some authorities, however, are taking this into account and are developing strategies involving a number of institutions in computer-based networks.

Some observers feel that developments so far have concentrated on streamlining basic administrative tasks, where a computer has an obvious contribution to make in terms of speed and efficiency, but that there is little evidence yet of the computer's use to provide management information Readers may like to judge for themselves from the following list of tasks which, according to our research, are now being performed with the aid of computers. These tasks do not, on the whole, refer to communications with bodies outside the individual institution.

Administration of independent, distance or open learning systems
Admissions/registration
Careers information and assessment
Class formation/allocation
Costing
Deployment of academic staff in FE
Equipment inventories
Information retrieval packages
Library administration
Intersite communications
Mailing lists
Options (and related administration)
Organisation of subject departments
Parents' evening schedule
Pupil/student assessment and performance
- item banking
- test scoring/marks processing
- pupil/student academic records
- pupil profiles
- school reports
- exams (eg. entries, results, timetabling)
- monitoring progress

Pupil records, non-academic
Returns to central Government (eg. Form 7)
School accounts
School attendance
School capitation allocations
School curriculum analysis
School curriculum analysis for planning staff/pupil numbers
School fund
School rolls/lists
Support staff assessment
Short courses management
Teacher/lecturer requirements
Timetabling aids
TEC courses-aspects of administration and management
Word processing (general)
Word processing for storage and delivery of learning material
Viewdata mailbox/notice board facilities

CET's involvement

In June 1983 a one-day seminar was convened at CET to discuss the introduction of IT into schools administration and management. The participants were individuals known by CET to have direct experience in research, development or use of computer-aided administration and management systems in schools or education authorities.

Groups discussed the organisational, technical and informational aspects of the question: ' What problems and potential solutions do you foresee for the introduction of IT to schools administration and management'. There was considerable agreement among all the groups, some of whose recommendations were as follows:

1. Systems analysis research should be undertaken in schools to identify: the current nature and quantity of administration and management functions in schools, which key staff are involved in carrying out the various functions, and the amount of time they devote to those duties, including voluntary out-of-hours work.

2. There should be strong emphasis on informing senior LEA staff and advisers, Her Majesty's Inspectorate and teachers about current needs, and on nationwide documentation of the knowledge and experience already gained in the field.

3. A national body should generate the core of a computer-based but hardware-independent, modular administration/management system.

4. A pilot scheme should be launched which is adequately funded and well publicised, to encourage professional interest and alert education authorities to the possibilities of standard software.

Some participants felt that national initiatives were necessary, whereas others were keen to support currently successful small-scale developments. There was interest in exploring the feasibility of transferring the Scottish Secondary Schools Computer Administration and Management Project (SCAMP) to non-Scottish education, and there was a call for the generation of in-service training materials for LEA staff, including teachers. Some participants felt that the MEP's brief should be extended, with the appropriate resources, to include computer-aided administration.

CET is actively disseminating further the ideas that came out of this seminar, seeking reactions to the need for initiatives at national level and continuing to gather information about developments in the field. Members of CET staff concerned with this work are Jenny Monaco and Lesley MacDonald, at 3 Devonshire Street, London WIN 2BA.

Practical tips

Drawing on the experience of our seminar participants among others, we offer some simple initial considerations for the intending purchaser or developer of computer-based educational administration and management systems.

- Try to analyse your future as well as current needs.
- Attempt a realistic costing, bearing in mind there may be no directly comparable costing for the system you are hoping to replace.
- Try to avoid doing your own development work. Having defined your needs, can you choose hardware and software to meet them? Even if your choice is constrained by existing hardware, a near match may be a more cost-effective choice than 'reinventing the wheel'.
- Establish what is happening within your own LEA; they may have developmental plans which could tie in with your own.
- Check with your examining bodies; they may have underway or be considering developments which could affect your choice.
- Use informal contacts to learn about and evaluate other people's systems.
- Be aware of the effects a new system will have; eg. who will need training?
- Enlist plenty of support from your colleagues and superiors.
- Explore the possibilities of sharing resources with other institutions or departments within the authority.

Sources of advice and information

NATIONAL

United Kingdom

British Computer Society:

01-637-0471

Schools Committee
13 Mansfield Road
London W1M 0PB

British Urban and Regional Information Systems Association:

0272-741117

School for Advanced Urban Studies
University of Bristol
Rodney Lodge
Grange Road
Bristol BS8 4EA

Computers in Education as a Resource: (CEDAR)
01-589-5111

Imperial College
South Kensington
London SW7 2AZ

Computer Use in Social Services Network: (CUSS)
0742-78555

Mr P Marsh
University of Sheffield
Dept. of Sociological Studies
Sheffield S10 2TN

Education Management Information Exchange: (EMIE)
0753-23156

The Mere
Upton Park
Slough
Berkshire
SL1 2DQ

Further Education Curriculum Review and Development Unit (FEU)

01-928-9222

Department of Education and Science
Elizabeth House
York Road
London
SE1 7PH

Independent Schools Microelectronics Centre (ISMEC)

0865-57644

Mr C Sweeten
Director
Westminster College
North Hinksey
Oxford
OX2 9AT

Local Government Operational Research Unit: (LGORU) 061-834-7253	Mr D Jackson/Mr J Eary Quay House Quay Street Manchester M3 3JH
Microcomputer Users in Secondary Education: (MUSE) 021-476-7669	Freepost Bromsgrove W.Midlands B61 7BR
National Computing Centre: 061-228-6333	Oxford Road Manchester M1 7ED

Northern Ireland

Northern Ireland Council for Educational Development (NICED) 0232-666212	Mr S Vallely Information Officer Stranmillis College Belfast BT9 5DY

Scotland

Scottish Council for Educational Technology (SCET) 041-334-9314	Dowanhill 74 Victoria Crescent Road Glasgow G12 9JN
Scottish Microelectronics Development Programme (SMDP) 041-357-0340	Dowanhill 74 Victoria Crescent Road Glasgow G12 9JN

Wales

Welsh Joint Education Committee (WJEC) 0222-561231	245 Western Avenue Cardiff CF5 2YX

Training Courses

SAM Courses (School Admin by Micro) 066-474-728	Educational Courses 54 Station Road Rearsby Leicestershire LE7 8YY

REGIONAL

Microelectronics Education Programme Regional Information Centres provide information and training - See Appendix for addresses

Advisory Unit for Computer-based Education: Endymion Road
Hatfield
Herts
AL10 8AU

We have not listed here university departments of education management, regional management centres or polytechnics, as so many are now involved, but we suggest that they are an important resource.

Examination Boards

The following examination boards have expressed positive interest in accepting from schools entries prepared with the assistance of a computer; in some cases entries can now be accepted on floppy disc or magnetic tape, and consideration is being given to feedback of results via computer media.

Joint Matriculation Board
061-273-2565
Manchester M15 6EU

Oxford Delegacy of Local Examinations:
0865-54291
Ewert Place
Summertown
Oxford
OX2 7BZ

Oxford and Cambridge Schools
Examination Board
0223-64326
10 Trumpington Street
Cambridge CB2 1QB

University of London School
Examinations Department
01-380-0892/0895
40-41 Gordon Square
London
WC1H OPD

East Midlands Regional Examinations Board
0602-295367
Robins Wood House
Robins Wood Road
Aspley
Nottingham. NG8 3NH

London Regional Examining Board
01-870-2144
Lyon House
104 Wandsworth
High Street
London SW18 4LF

The North Regional Examinations Board
0632-862711
Wheatfield Road
Westerhope
Newcastle upon Tyne
NE5 5JZ

Southern Regional Examinations Board
0703-32312

Avondale House
33 Carlton Crescent
Southampton SO9 4YL

South Western Examinations Board
0272-23434

23-29 Marsh Street,
Bristol BS1 4BP

Yorkshire and Humberside Regional
Examinations Board
0423-66991

31/33 Springfield Avenue
Harrogate
North Yorkshire HG1 2HW

LOCAL

Some teachers centres are listed below, and these, even if not listed, should be approached for advice and guidance.

Many of the names listed here are individuals who have expressed their willingness to help with the spread of information and good practice. It would be appreciated if enquiries addressed to them were accompanied by an s.a.e.

INNER LONDON

Mr P Watts, Inner London Educational Computing Centre, John Ruskin Street, London SE5 0PQ

London Boroughs-Havering

Mr W R Broderick, Education Offices, Mercury House, Mercury Gardens, Romford, Essex RM1 3DR

Tyne and Wear

Mr R Bloodworth, Manor Park School, Benton Road, Newcastle upon Tyne, NE7 7E

West Midlands

Mr F G R Vincent/ Mr P Piddock, Faculty of Education, Birmingham University P O Box 363, Birmingham B15 2TT

Mr T Reeve, School Inspector for Information Technology, City of Birmingham Education Authority, Council House, Margaret Street, Birmingham B3 3BU

Mr B Drury, King Edwards School, Frederick Road, Aston, Birmingham B6 6DJ

Mr M Attewell, Walsall Educational Development Centre, Wolverhampton Road Walsall WS2 8PN

Mr B Slater, 15 Forest Way, Arbury View Estate, Nuneaton CV10 7NT

West Yorkshire

Mr D T Watson, Directorate of Educational Services, City of Bradford Metropolitan Council, Provincial House, Bradford, W.Yorks BD1 1NP

Mr T Barber, Leeds Polytechnic, Queenswood House, Beckett Park Site, Leeds LS6 3QS

Mr J Dooley, John Taylor's Teachers Centre, 53 Headingly Lane, Leeds LS6 1AA

Bedfordshire

Mr P Neale, Lea Manor High School, Northwell Drive, Luton LU3 3TL

Mr J Warwick, Education Office, Bedfordshire County Council, County Hall, Bedford MK42 9AP

Cambridgeshire

Mr T Hinds, Second Deputy Chief, Education Officer, Cambridgeshire Education Department, Shire Hall, Castle Hill, Cambridge CB3 0AP

Mr R Dingle, Orton Longueville School, Oundle Road, Orton, Peterborough PE2 0EA

Cheshire

Mr J Dodridge, Adviser, Education Department, County Hall, Chester CH1 1SQ

Cleveland

Mr P Roxborough, Hartlepool College of FE, Stockton Street, Hartlepool TS24 7NU

Mr J Bancroft, Cleveland Council, R & I Unit 6th Floor, Rede House, 67 Corporation Road, Middlesborough TS1 1LY

Mr H J Curtis, CECC, Prissick Base, Marton Road, Middlesborough TS4 3RZ

Clwyd

Mrs S Williams, Computer Manager, Microprocessor Centre, The Coach House, Kelsterton College, Connahs Quay, Deeside CH5 4BB

Derbyshire

Mr M Tate, Derbyshire Software Centre, Derby Lonsdale College, Western Road, Mickleover, Derbyshire DE3 5GX

Dorset

Mr T Challis, Area Principal for N W Dorset, c/o Ferndown Upper School, Cherry Grove, Ferndown, Dorset BH22 9EY

Gwent

Mr P Hepburn, Gwent Educational Computing Centre, St Andrews, Newport, Gwent NPT OGP

Hampshire

Mrs C M Richmond, Deputy Principal, Barton Peveril College, Cedar Road, Eastleigh, Hants SO5 5EA

Hertfordshire

Mr J Spenceley, Education Offices, County Hall, Hertford SG13 8DF

Humberside

Dr M Garnet, Education Offices, County Hall, Beverley, Humberside HU17 9BA

Lincolnshire

Mr Sands, Education Offices, County Offices, Newland, Lincoln LN1 1YQ

Nottinghamshire

Mr J Pearce, Mathew Holland, Comprehensive School, Selston, Nottinghamshire NG16 6BW

Mr K Atkin, Inspector, Computer Education, Notts County Council, Eaton Hall International, Retford, Notts DN22 0PP

Oxfordshire

Ms M Ford, Computer Services, Oxfordshire County Council, County Hall, New Road, Oxford OX1 1ND

Somerset

Mr D Fallows, The Blue School, Wells, Somerset BA5 2NR

Mr Bruce, Holyrood School, Zembard Lane, Chard, Somerset TA20 1JJ

South Glamorgan

Mr H Lloyd, Microelectronics Adviser, South Glamorgan, County Council, Education Offices, Kingsway, Cardiff CF1 4JG

Strathclyde

Renfrew Education Authority, Regional Offices, Cotton Street, Paisley PA1 1LE

Timetable Unit, Dundas Vale Teachers Centre, 6 New City Road, Glasgow G4 9JR

Warwickshire

Warwickshire Education Department, 22 Northgate Street, Warwick CV34 4SR

SOFTWARE SUPPLIERS

These people or organisations supply lists of software for administration/management tasks. We have indicated in brackets where the the information is machine-specific.

MUSE (various)
Freepost
Bromsgrove
W.Midlands B61 7BR

Mr P Bird (various)
41 Greenhill Road
Alveston
Bristol BS18 2LZ

Mr J Dooley (380Z)
John Taylor's Teachers Centre
53 Headingly Lane
Leeds LS6 1AA

Mr P Watts (380Z)
Inner London Educational
Computing Centre
John Ruskin Street
London SE5 0PQ

RML Market Place (380Z)
Research Machines Limited
P O Box 75
Mill Street
Oxford
OX2 OBW

The following are software suppliers, including commercial producers as well as specific project software (eg. Femis).

FEMIS
(Further Education Management Information System)
Mrs D Herbert
FEMIS Unit
Coombe Lodge FE Staff College
Blagdon
Bristol BS18 6RG

SCAMP
(Secondary Schools Computer Administration and Management Project)
Carlo Tomasso
Director
Dowanhill
74 Victoria Crescent Road
Glasgow, G12 9JN

MEMS
(Microbased Educational Management System)
Computer and Network Installation Services
Hollis Lane
Wilden
Beds MK44 2DB

MAIL
(Micro Aided Learning)
Richard Freeman
Director
National Extension College
18 Brooklands Avenue
Cambridge CB2 2HN

Software Production Associates
P O Box 59
Leamington Spa
Warwickshire CV31 3QA

Educational Administration Software
Somerville House
Brunswick Road
Manchester
M20 9GA

H.I.D. Co.
P O Box 31
Orpington
Kent BR6 6ND

Longman Group Resources Unit
33-35 Tanner Row
York YO1 1JP

Hutchinson Software
Freepost 15
London WIE 4QZ

PUBLICATIONS

The magazines 'Educational Computing' and 'Personal Computer World' have published a number of articles on the topic. They also produce software listings which include packages for administration and management. For secondary schools the MUSE journal 'Computers in Schools' is helpful, as is 'Micro Scope' for primary schools. User group publications such as 'Read Using' (RML), 'Beebug' and 'Acorn User' (BBC) should not be overlooked.

Some useful books:

Bird, P. 'Microcomputers in School Administration', Hutchinson. Forthcoming Summer 1984.

Carleton Finch, and others, 'A School Administrator's Guide to computers in Education.' September, 1983. £6.95

Lancaster, D. 'Microcomputers in School Administration' Sheffield Papers in Education Management 34.

RESEARCH

Current or recent research includes the following:

R H Smith
Director of Learning Resources
The NE Wales Institute of HE
Kelsterton College
Connah's Quay
Clwyd CH5 4BB

UNESCO: European Joint Study Group II: 'The new technologies in information and communication and their impact on education.

Alison Shaw
Sheffield City Polytechnic
36 Collegiate Crescent
Sheffield
S10 2BP

'The Management Implications of the use of Microcomputers in the Administrative Work of Secondary Schools.'

Martin Ward
Vice Principal/Director of Studies
New College
King Street
Wellington
Telford
Shropshire TF1 1NY

'The Use of Microcomputers in the Administration of Sixth Form and Tertiary Colleges.'

George Wigglesworth
670 Brookside
Chesterfield
S40 3NU

The Introduction of Microcomputer Assisted Administration into Further and Higher Education.

An unpublished report on 'Computers and Learner Profiles in Secondary Schools and Colleges' is available on application to CET.

This information sheet was prepared by Jenny Monaco and Lesley MacDonald at CET, 3 Devonshire Street, London W1N 2BA

Appendix 1 MEP Regional Information Centres

CAPITAL Membership:Bexley, Bromley, Croydon, Ealing, Hounslow, ILEA, Kingston, Merton, Richmond, Sutton
Information Officer Sandra Crapper, ILEA Educational Computer Centre, John Ruskin Street, London SE5 OPQ Tel:01-735 9123

CHILTERN Membership:Barnet, Bedfordshire, Brent, Buckinghamshire, Cambridge, Enfield, Haringey, Harrow, Hertfordshire, Hillingdon, Oxfordshire
Information Officer Ray Templeton, Advisory Unit for Computer Based Education (AUCBE), Endymion Road, Hatfield, Hertfordshire, AL10 8AU. Tel: 07072 65443.

EASTERN Membership:Barking, Essex, Havering, Newham, Norfolk, Redbridge, Suffolk, Waltham Forest.
Information Officer Ann Goddard, Chelmer Institute of Higher Education, Victoria Road South, Chelmsford, Essex, SM1 1LL. Tel: 0245 356940

EAST MIDLANDS Membership: Derbyshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire.
Information Officer Lisa Blunt, Towers Library, University of Technology, Loughborough, Leicestershire,LE11 3TU Tel: 0509 37398

GREATER MANCHESTER AND LANCASHIRE Membership: Bolton, Bury, Lancashire, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, Wigan
Information Officer Jenny Tustin, Manchester Polytechnic, Didsbury School of Education, 799 Wilmslow Road, Manchester, M20 8RR. Tel: 061-445 0780

MERSEYSIDE WITH CHESHIRE Membership: Cheshire, Knowsley, Liverpool, St. Helens, Sefton, Wirral,
Information Officer Neil Stanley, Merseyside Computer Centre, Liverpool Polytechnic, Rodney House, 70 Mount Pleasant, Liverpool, L3 5UX. Tel: 051-207 3581 x 2531

THE NORTH Membership: Cleveland, Cumbria, Durham, Gateshead, Newcastle-upon-Tyne, North Tyneside, South Tyneside,Sunderland, Northumberland.
Information Officer Sheila Whittington, Resources Centre, Newcastle Polytechnic, Coach Lane Campus, Newcastle-upon-Tyne, NE7 7XA. Tel: 0632 700424

NORTHERN IRELAND Membership: Education and Library Boards, Belfast, Western, North Eastern, Southern.South Eastern
Information Officer John Hall, Micronet Centre, South Building, New University of Ulster, Coleraine, Northern Ireland. Tel: 0265 4141 Ext. 341.

SOUTHERN COUNTIES Membership: Berkshire, East Sussex, Hampshire, Isle of Wight, Kent, Surrey, West Sussex.
RIC Director: Peter Neate, Southern Region Microelectronics Information Centre, Furnace Drive, Furnace Green, Crawley, W. Sussex, RH10 6JB. Tel: 0293 546216. Sub-Centre: King Alfreds College, Winchester, Hampshire.

SOUTH WEST Membership: Avon, Cornwall, Devon, Dorset, Gloucestershire, Somerset, Wiltshire.
Director: Richard Margetts, Bristol Polytechnic, Coldharbour Lane, Frenchay, Bristol, BS16 1QY. Tel: 0272 656261.
Second Centre: Dr. J. Coupland, College of St. Mark and St. John, Derriford Road, Plymouth, Devon, PL6 8BH. Tel: 0752 784619.

SOUTH YORKSHIRE AND HUMBERSIDE Membership: Barnsley, Doncaster, Humberside, North Derbyshire, Rotherham, Sheffield.
Information Officer Andrew Parry, Educational Development Centre, Kingfisher First School Coventry Grove, Doncaster DN2 4PY. Tel: 0302 63784/63800.

WALES Membership: Gwynedd, Clwyd, Powys, Dyfed, Gwent, West, Mid and South Glamorgan.
Information Officer Mrs M Hopkin, Welsh Joint Education Committee, 245 Western Avenue, Cardiff CF5 2YX Tel: (0222) 561231 Sub-Centre: MEP Centre, 101 Box Lane, Wrexham, Clwyd, LL12 7RB.

WEST AND NORTH YORKSHIRE Membership: Bradford, Calderdale, Kirklees, Leeds, North Yorkshire, Wakefield.
Information Officer:Lyn Coggin, Queenswood House, Leeds Polytechnic, Becketts Park Site, Leeds, LS6 3QS. Tel: 0532 783437/8.

WEST MIDLANDS Membership: Birmingham, Coventry, Dudley, Hereford and Worcester, Sandwell, Shropshire, Solihull, Staffordshire, Walsall, Warwickshire, Wolverhampton.
Information Officer: Chris Pedley, MACE, Four Dwellings School, Dwellings Lane, Quinton, Birmingham, B32 1RJ. Tel: 021-421 6361.